

Appl. No. 09/241,450
Amdt. dated March 2, 2006
Reply to Office action of December 2, 2005

REMARKS

Reconsideration of this application is respectfully requested.

Claims 1-9 and 29-41 were pending. Claims 1-9 and 29-41 were finally rejected. This amendment is accompanied by a Request for Continuing Examination.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-9 and 29-41 were rejected under 35 U.S.C. § 103 as being unpatentable over Green. et al. (US 5,397,631) in view of Meier et al. (US 5,169,700). Applicant maintains all the arguments as set forth in the previous reply, which arguments are incorporated by reference herein. Applicant submits that the claims should be allowable over Green et al. and Meier et al. in view of the previous remarks, the amendments made herewith, and the following remarks.

The independent claims 1 and 29 have been amended to require that the body layer is flexible and resilient, and the cover layer is flexible and resilient to form a flexible, resilient composite. Support for the amendments to claims 1 and 29 is provided at page 2, lines 8 and 9; page 4, line 1; page 6, line 23; page 7, lines 20 and 21; page 8, lines 15 and 16; page 8, lines 23 and 24; page 9, line 9.

The combined teachings of Green et al. and Meier et al. would not have rendered amended claims 1 and 29 obvious to one of ordinary skill in the art at the time the invention was made.

Green et al. describes a tile backer product comprising a gypsum core with a non-woven layer embedded in the gypsum core. The Action equates Green's non-woven layer with the claimed body layer. However, at the time Green applies a coating to his non-woven mat, the non-woven mat is already embedded in the gypsum when his coating is applied. Green's mat is joined by the following steps: "The fibrous mat-faced gypsum board can be made efficiently by forming an aqueous gypsum slurry which contains excess water and placing thereon the fibrous

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mat. Aided by heating, excess water evaporates through the porous mat after the calcined gypsum sets." (col. 6, lines 14-19.).

Because gypsum is a brittle material with weak tensile strength, and Green's mat is already embedded in the gypsum at the time of coating, Green's body layer is not flexible and resilient at the time it is coated, and Green's resulting composite is not flexible and resilient.

The secondary reference, Meier does not cure the deficiency of Green et al. with respect to claims 1 and 29. The action alleges that one of ordinary skill would have been motivated to used Meier's insulation thickness. Even assuming (solely for purpose of argument) that one of ordinary skill wanted to improve the insulating properties of Green's board, a person of ordinary skill would not have removed Green's gypsum from the configuration altogether. The gypsum core is central to Green's tile backer structure. Thus, even if a thick insulation layer could somehow be substituted for Green's 1 millimeter mat, the resulting body layer would still be rigid by virtue of being embedded in gypsum.

One of ordinary skill in the art would not have been motivated by the combined teachings of Green and Meier to somehow eliminate the rigid, brittle gypsum core from Green's tile backer, to produce a flexible resilient product as claimed in claims 1 and 29. Such a product would not be suitable for its intended use, either as a tile backer, or as a component of an insulating system of the type suggested by Green et al.

The only insulating system suggested by Green et al. is of the type described in US 4,547,496 to Lehnert, which Green references. Lehnert 4,647,496 describes a mat faced gypsum board used in exterior insulation systems. The mat facing on the gypsum board is used as a surface for bonding foam insulation board to the gypsum.¹ When Green states that his tile backer board can be used as a component of an insulation system, he is referring to use of the tile backer board in the manner disclosed by Lehnert 4,647,496. There is no suggestion in Green et

¹ See col. 13, lines 59-62 ("A foamed polystyrene panel 88, about 1 inch thick, is adhered to the fibrous mat-faced board 82 by adhesive 90.")

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al. that his system be dismembered to remove the gypsum to produce a product having the flexible and resilient attributes of Applicant's claim 1.

Therefore, the rejection of claims 1 and 29 should be withdrawn. The dependent claims should all be allowed for at least the same reasons as set forth above with reference to claims 1 and 29.

Claim 2 is canceled without prejudice to reduce the government fees for the additional claims being added. Cancellation of claim 2 is not related to patentability.

Claim 32 is amended to require a second face opposite to the face embedded by the cover layer and to require that the composite further comprises an outer layer on the second face comprising metal foil. The combined teachings of Green et al. and Meier et al. neither disclose nor suggest this feature. One of ordinary skill would not have put a foil layer on the side of Green's mat opposite the side having the coating. Such a foil layer would interfere with the ability of Green's mat to become integrally embedded in Green's gypsum, increasing the probability of delamination and compromising the integrity of the product. Therefore, claim 32 would not have been obvious. New claim 42 includes similar features, and is dependent on claim 1. Claim 42 should be patentable for at least the same reason as claim 32. New independent claim 47 also requires the foil layer on the second face opposite the roughly textured face, and should also be patentable.

New claim 43 is directed to a composite having a body layer of a fiber glass or mineral fiber thermal and acoustical insulation material having a roughly textured face with a cover layer thereon, and an exposed fiber glass or mineral fiber face opposite the roughly textured face. Support for claim 43 is provided in FIGS. 2A and 2B and in claim 1. Because Green et al. embeds the face of his mat opposite the coating in gypsum, one of ordinary skill would not have been motivated by Green et al. taken alone or in combination with Meier et al., to provide an exposed face opposite the coated side. Therefore claim 43 should be allowable.

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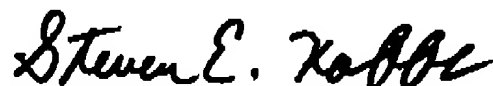
New claim 44 requires an installed composite. The composite is installed so as to attenuate transmission of thermal energy or sound through a duct. Green et al. neither disclose nor suggest an installed product having these features. Therefore claim 44 should be allowable. Support for claim 44 is at page 6, lines 24-26.

New claim 45 requires that the body layer is flexible and resilient when the cover layer is cast on the body layer, and the cover layer is flexible and resilient. As noted above with reference to claim 1, Green's body layer is embedded in set gypsum when the coating is applied, so Green's body layer is not flexible and resilient when the coating is applied. Therefore claim 45 should be allowable.

New claim 46 requires that the body layer is compressible. Support is provided at page 14, lines 24-26.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance, and request early notification to that effect.

Respectfully submitted,



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